

Notice of Allowability

Application No.

09/389,842

Examiner

Syed Zia

Applicant(s)

LEVINE ET AL.

Art Unit

2131

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 09/05/2006.
2. ☒ The allowed claim(s) is/are 1-4,6,7,9,11-17,19,20,23-30,32,33 and 36-39.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

[Signature]
SYED ZIA
PRIMARY EXAMINER

DETAILED ACTION

Allowable Subject Matter

1. Claims 1-4, 6-7, 9, 11-17, 19-20, 23-30, 32-33, and 36-39 are allowed.
2. The following is an Examiner's statement of reason for allowance:

The above mentioned claims are allowable over prior arts because the CPA (Cited Prior Art) of record fails to teach or render obvious the claimed limitations in combination with the specific added limitations, as recited in independent Claims 1, 7, 12, 14, 20, 25, 27, 33, 38 and subsequent dependent claims.

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Emmanuel Rivera (Reg. No. 47,760) on November 09, 2006.

This application has been amended as follows:

IN THE CLAIMS

Claim 1 (Currently amended): A method performed at a server computer, for tracking a requested signal, the method comprising:

receiving a request for the requested signal;

generating transaction identification data which identifies the received request;

including a pattern in the requested signal to form a watermarked signal using a predetermined basis signal previously derived from a digital product signal, wherein the transaction identification data can be derived from the pattern; further wherein the inclusion of the basis signal in the requested signal is designed to introduce no more than a predetermined maximum level of perceptibility to the requested signal, wherein the including comprises:

selecting watermarked signal fragments representing a first logical value for corresponding portions of the pattern which have the first logical value;

selecting watermarked signal fragments representing a second logical value for corresponding portions of the pattern which have the second logical value; and

combining the watermarked signal fragments representing the first and second logical values to form the watermarked signal.

Claim 2 (Original): The method of Claim 1 where including comprises:

retrieving the basis signal; and

including the basis signal in the requested signal to form the watermarked signal in such a manner that the pattern is embedded in the watermarked signal and can be recognized in the watermarked signal.

Claim 3 (Previously presented): The method of Claim 2 wherein including the basis signal comprises:

logically dividing the basis signal into segments; and
for each segment of the basis signal,
adding the segment of the basis signal to a corresponding segment of the requested signal upon a condition in which a corresponding portion of the pattern has a first logical value; and
subtracting the segment of the basis signal from the corresponding segment of the requested signal upon a condition in which the corresponding portion of the pattern has a second logical value.

Claim 4 (Previously presented): The method of Claim 1 further comprising:
sending watermarked signal in response to the request for the requested signal.

Claim 5 (Canceled)

Claim 6 (Previously presented): The method of Claim [[5]]1 wherein the watermarked signal fragments are compressed such that the watermarked signal fragments comprise the watermarked signal in a compressed form.

Claim 7 (Currently amended): A method performed at a server computer, for enabling embedding of transaction-specific identification data into a requested signal, the method comprising:

logically dividing the requested signal into segments;

for each segment,

embedding a first logical value in the segment to form a first embedded segment;

embedding a second logical value in the segment to form a second embedded segment; [[and]]

including both the first and second embedded segments in a composite signal
comprising

including the first embedded segment in a first frame;

compressing the first frame to form a first compressed frame;

including the second embedded segment in a second frame;

compressing the second frame to form a second compressed frame; and

including both the first and second compressed frames in the composite signal;

and

for each of the segments of the requested signal:

selecting from first and second embedded segments of the composite signal according to
a corresponding bit of the transaction-specific identification data.

Claim 8 (Canceled)

Claim 9 (Currently amended): The method of Claim [[8]]7 further comprising:

combining the selected embedded segments of the composite signal to form a watermarked signal which includes the transaction-specific identification data embedded therein.

Claim 10 (Canceled)

Claim 11 (Original): The method of Claim [[10]]7 wherein including both the first and second embedded segments in a composite signal further comprises:

determining that the first and second compressed frames are equivalent; and

including a single compressed frame in the composite signal to represent both the first and second compressed frames.

Claim 12 (Previously presented): A method performed at server computer, for embedding transaction-specific identification data into a requested signal, the method comprising:

retrieving a composite signal which includes, for each of one or more corresponding portions of the requested signal, a first marked segment which represents a first logical value embedded in the corresponding portion of the requested signal and a second marked segment which represents a second logical value embedded in the corresponding portion of the requested signal;

for each of the corresponding portions of the requested signal, selecting segments of the composite signal according to logical values of corresponding bits of the transaction-specific identification data; and

combining the selected segments to form a watermarked signal which includes the transaction-specific identification data embedded therein, wherein the watermarked signal is further formed using a predetermined basis signal previously derived from a digital product signal.

Claim 13 (Original): The method of Claim 12 wherein the first and second marked segments are compressed such that watermarked signal formed by combining the selected segments is compressed.

Claim 14 (Currently amended): A computer-readable storage medium on which is stored computer code which, when executed by a server-side computer, causes the computer to enable tracking a requested signal by:

receiving a request for the requested signal;

generating transaction identification data which identifies the received request;

including a pattern in the requested signal to form a watermarked signal using a predetermined basis signal, previously derived from a digital product signal, wherein the transaction identification data can be derived from the pattern; further wherein the inclusion of the basis signal in the requested signal is designed to introduce no more than a predetermined maximum level of perceptibility to the requested signal, wherein including comprises:

selecting watermarked signal fragments representing a first logical value for corresponding portions of the pattern which have the first logical value;

selecting watermarked signal fragments representing a second logical value for corresponding portions of the pattern which have the second logical value; and

combining the watermarked signal fragments representing the first and second logical values to form the watermarked signal.

Claim 15 (Original): The computer-readable storage medium of Claim 14 where including comprises:

retrieving the basis signal; and

including the basis signal in the requested signal to form the watermarked signal in such a manner that the pattern is embedded in the watermarked signal and can be recognized in the watermarked signal.

Claim 16 (Previously presented): The computer-readable storage medium of Claim 15 wherein including the basis signal comprises:

logically dividing the basis signal into segments; and

for each segment of the basis signal,

adding the segment of the basis signal to a corresponding segment of the requested signal upon a condition in which a corresponding portion of the pattern has a first logical value; and

subtracting the segment of the basis signal from the corresponding segment of the requested signal upon a condition in which the corresponding portion of the pattern has a second logical value.

Claim 17 (Original): The computer-readable storage medium of Claim 14 wherein the computer code, when executed by the computer, further causes the computer to enable tracking a requested signal by:

sending the watermarked signal in response to the request for the requested signal.

Claim 18 (Canceled)

Claim 19 (Original): The computer-readable storage medium of Claim ~~[[18]]~~14 wherein the watermarked signal fragments are compressed such that combining the watermarked signals fragments forms the watermarked signal in a compressed form.

Claim 20 (Previously presented): A computer-readable storage medium on which is stored computer code which, when executed by a server-side computer, causes the computer to enable embedding of transaction-specific identification data into a requested signal by:

logically dividing the requested signal into segments;

for each segment,

embedding a first logical value in the segment to form a first embedded segment;

embedding a second logical value in the segment to form a second embedded segment; ~~[[and]]~~

including both the first and second embedded segments in a composite signal~~[[.]]~~;

combining the selected embedded segments of the composite signal to form a watermarked signal which includes the transaction-specific identification data embedded therein; and

for each of the segments of the requested signal:

selecting from first and second embedded segments of the composite signal according to a corresponding bit of the transaction-specific identification data.

Claim 21 (Canceled)

Claim 22 (Canceled)

Claim 23 (Original): The computer-readable storage medium of Claim 20 wherein including both the first and second embedded segments in a composite signal comprises:

- including the first embedded segment in a first frame;
- compressing the first frame to form a first compressed frame;
- including the second embedded segment in a second frame;
- compressing the second frame to form a second compressed frame; and
- including both the first and second compressed frames in the composite signal.

Claim 24 (Original): The computer-readable storage medium of Claim 23 wherein including both the first and second embedded segments in a composite signal further comprises:

- determining that the first and second compressed frames are equivalent; and
- including a single compressed frame in the composite signal to represent both the first and second compressed frames.

Claim 25 (Previously presented): A computer-readable storage medium on which is stored computer code which, when executed by a server-side computer, causes the computer to enable embedding transaction-specific identification data into a requested signal by:

- retrieving a composite signal which includes, for each of one or more corresponding portions of the requested signal, a first marked segment which represents a first logical value embedded in the corresponding portion of the requested signal and a second marked segment which represents a second logical value embedded in the corresponding portion of the requested signal;

for each of the corresponding portions of the requested signal, selecting segments of the composite signal according to logical values of corresponding bits of the transaction-specific identification data; and

combining the selected segments to form a watermarked signal using a predetermined basis signal previously derived from a digital product signal, which includes the transaction-specific identification data embedded therein.

Claim 26 (Original): The computer-readable storage medium of Claim 25 wherein the first and second marked segments are compressed such that watermarked signal formed by combining the selected segments is compressed.

Claim 27 (Currently amended): A server computer comprising:
a processor;
a memory coupled to the processor; and
a watermarking which executes in the processor from the memory and which, when executed, enables tracking of a requested signal by:

receiving a request for the requested signal;

generating transaction identification data which identifies the received request;

and

including a pattern in the requested signal to form a watermarked signal using a predetermined basis previously derived from a digital product signal, wherein the transaction identification data can be derived from the pattern; further wherein the inclusion of the basis

signal in the requested signal is designed to introduce no more than a predetermined maximum level of perceptibility to the requested signal, wherein including comprises:

selecting watermarked signal fragments representing a first logical value for corresponding portions of the pattern which have the first logical value;

selecting watermarked signal fragments representing a second logical value for corresponding portions of the pattern which have the second logical value; and

combining the watermarked signal fragments representing the first and second logical values to form the watermarked signal.

Claim 28 (Original): The computer system of Claim 27 where including comprises:

retrieving the basis signal; and

including the basis signal in the requested signal to form the watermarked signal in such a manner that the pattern is embedded in the watermarked signal and can be recognized in the watermarked signal.

Claim 29 (Previously presented): The computer system of Claim 28 wherein including the basis signal comprises:

logically dividing the basis signal into segments; and

for each segment of the basis signal,

adding the segment of the basis signal to a corresponding segment of the requested signal upon a condition in which a corresponding portion of the pattern has a first logical value; and

subtracting the segment of the basis signal from the corresponding segment of the requested signal upon a condition in which the corresponding portion of the pattern has a second logical value.

Claim 30 (Original): The computer system of Claim 27 wherein the watermark, when executed, enables tracking of a requested signal by also:

sending the watermarked signal in response to the request for the requested signal.

Claim 31 (Canceled)

Claim 32 (Original): The computer system of Claim ~~[[31]]~~27 wherein the watermarked signal fragments are compressed such that combining the watermarked signals fragments forms the watermarked signal in a compressed form.

Claim 33 (Currently amended): A server computer comprising:

a processor;

a memory coupled to the processor; and

a blank watermark which executes in the processor from the memory and which, when executed, enables embedding of transaction-specific identification data into a requested signal by:

logically dividing the requested signal into segments;

for each segment,

embedding a first logical value in the segment to form a first embedded segment;

embedding a second logical value in the segment to form a second embedded segment; [[and]]

including both the first and second embedded segments in a composite signal[[]];

combining the selected embedded segments of the composite signal to form a watermarked signal which includes the transaction-specific identification data embedded therein; and

for each of the segments of the requested signal:

selecting from first and second embedded segments of the composite signal according to a corresponding bit of the transaction-specific identification data.

Claim 34 (Canceled)

Claim 35 (Canceled)

Claim 36 (Original): The computer system of Claim 33 wherein including both the first and second embedded segments in a composite signal comprises:

including the first embedded segment in a first frame;

compressing the first frame to form a first compressed frame;

including the second embedded segment in a second frame;

compressing the second frame to form a second compressed frame; and

including both the first and second compressed frames in the composite signal.

Claim 37 (Original): The computer system of Claim 36 wherein including both the first and second embedded segments in a composite signal further comprises:

determining that the first and second compressed frames are equivalent; and

including a single compressed frame in the composite signal to represent both the first and second compressed frames.

Claim 38 (Currently amended): A server computer comprising:

a processor;

a memory coupled to the processor; and

a watermarker which executes in the processor from the memory and which, when executed, embeds transaction-specific identification data into a requested signal by:

retrieving a composite signal which includes, for each of one or more corresponding portions of the requested signal, a first marked segment which represents a first logical value embedded in the corresponding portion of the requested signal and a second marked segment which represents a second logical value embedded in the corresponding portion of the requested signal;

for each of the corresponding portions of the requested signal,

selecting segments of the composite signal according to logical values of corresponding bits of the transaction-specific identification data; and

combining the selected segments to form a watermarked signal using a predetermined basis signal previously derived from a digital product signal, which includes the transaction-specific identification data embedded therein.

Claim 39 (Original): The computer system of Claim 38 wherein the first and second marked segments are compressed such that watermarked signal formed by combining the selected segments is compressed.

Claim 40 (Canceled)

Claim 41 (Canceled)

Claim 42 (Canceled)

Claim 43 (Canceled)

Claim 44 (Canceled)

Claim 45 (Canceled)

Claim 46 (Canceled)

Claim 47 (Canceled)

Claim 48 (Canceled)

Claim 49 (Canceled)

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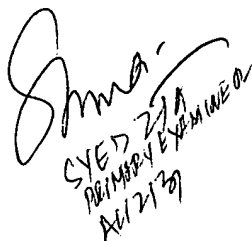
Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Syed Zia whose telephone number is 571-272-3798. The examiner can normally be reached on 9:00 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz Sheikh can be reached on 571-272-3795. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

SZ
November 12, 2006


SYED ZIA
PRIMARY EXAMINER
11/12/06